AF/Z/M 5500-64900/TT4212

# IN THE UNITED STATES PATENT AND TRADEMARK OFFICE BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

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In re Application of:

Edward C. Guerrero Jr. et al.

Serial No.: 09/753,867

Filed: January 2, 2001

Title: Voltage Request Arbiter

Group Art Unit: 2111

Examiner: Dang, Khanh Nmn

Atty. Dkt. No.: 5500-64900 TT4212

> CERTIFICATE OF MAILING 37 C.F.R. § 1.8

I hereby certify that this correspondence is being deposited with the U.S. Postal Service with sufficient postage as First Class Mail in an envelope addressed to: Commissioner for Patents, P.O. Bóx 1450, Alexandria, VA 22313-1450, on the date indicated below:

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Robert C. Kowert
Name of Registered Representative

June 23, 2004

Signature

APPEAL BRIEF

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Technology Center 2100

**Mail Stop Appeal Brief- Patents** 

Commissioner for Patents Washington D.C. 20231

Sir/Madam:

Further to the Notice of Appeal of April 23, 2004, Appellants present this Appeal Brief. Appellants respectfully request that this appeal be considered by the Board of Patent Appeals and Interferences.

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#### I. REAL PARTY IN INTEREST

The subject application is owned by Advanced Micro Devices, Inc., a corporation organized and existing under and by virtue of the laws of the State of Delaware, and having its principal place of business at One AMD Place, Sunnyvale, CA 94088, as evidenced by the assignment recorded at Reel 011848, Frame 0116.

#### II. RELATED APPEALS AND INTERFERENCES

No other appeals or interferences are known which would directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

#### III. STATUS OF CLAIMS

Claims 1-40 were present in the original application. Claims 1-40 are pending and stand finally rejected, and are the subject of this appeal. A clean copy of claims 1-40, as on appeal, is included herewith as the Appendix.

#### IV. STATUS OF AMENDMEMNTS

No amendments to the claims have been filed subsequent to the final rejection. The Appendix reflects the current state of the claims on appeal.

#### V. SUMMARY OF THE INVENTION

One or more devices in a computer system may be configured to each assert a voltage request. These devices may comprise processors in some embodiments. An arbiter may be configured to receive several input voltage requests from the devices, to choose a voltage, and to send a request to output the selected voltage to one or more power supplies. Thus, even if the devices request distinct voltages, the arbiter may output a selected voltage request to the power supply(ies) to supply a voltage corresponding to the request to the devices. All of the devices may receive the same voltage, even if they

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originally requested different voltages. In some embodiments, the arbiter may choose a voltage from the voltage requests asserted by the devices. In other embodiments, the arbiter may choose a voltage that does not correspond to any of the requests asserted by the devices. The different voltage requests may comprise VID codes. In some embodiments, the arbiter may include a programmable logic device configured to receive the voltage requests, choose a voltage and output a request to the power supplies. *See* Fig. 2; specification, p. 9, line 4 - p. 9, line 29.

If only one device configured to assert a voltage request is present in the system, the arbiter may be configured to choose that device's voltage request. In some embodiments, the arbiter may be configured to receive a low power signal that indicates whether the devices should be in a low power state. The arbiter may be configured to choose a low power voltage request if the low power signal indicates that the devices should be in the low power state. In some embodiments, there may be multiple low power states, so the arbiter may also be configured to receive an additional low power signal. The arbiter may be configured to receive one or more power supply signals indicating whether any of the power supplies are not functioning properly. In certain embodiments, the arbiter may choose a low power voltage request if one of the power supply signals indicates that one of the power supplies is not functioning. *See* Figs. 3-4; specification, p. 10, line 1 - p. 10, line 22.

The arbiter may also be configured to receive several signals that indicate whether each of the one or more devices is actually present in the computer system in some embodiments. If none of the devices are present, the arbiter may be configured to choose a low power voltage request. In other embodiments, the arbiter may be configured to choose a voltage request asserted by a device if the signals indicate that device is the only one of the devices present in the computer system. *See* Fig. 6; specification, p. 11, line 4 - p. 11, line 26.

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#### VI. <u>ISSUES</u>

- 1. Whether claims 12 and 39 are indefinite under 35 U.S.C. § 112, second paragraph, for failing to particularly point out and distinctly claim the subject matter, which applicants regard as the invention.
- 2. Whether claims 1-5, 11-21, 27-32 and 40 are anticipated by Voegeli et al. (U.S. Patent 6,448,672) under 35 U.S.C. § 102(e).
- 3. Whether claims 6-10, 22-26 and 33-39 are obvious with respect to Voegeli et al. (U.S. Patent 6,448,672) under 35 U.S.C. § 103(a).

# VII. GROUPING OF CLAIMS

Claims 1, 2, 4, 9, 11, 13-18, 20, 25, 27, 29, 30, 36, 38 and 40 stand or fall together for purposes of this appeal only.

Claims 3, 19 and 31 stand or fall together for purposes of this appeal only.

Claims 5, 21 and 32 stand or fall together for purposes of this appeal only.

Claims 6, 22 and 33 stand or fall together for purposes of this appeal only.

Claims 7, 23 and 34 stand or fall together for purposes of this appeal only.

Claims 8, 24 and 35 stand or fall together for purposes of this appeal only.

Claims 10, 26 and 37 stand or fall together for purposes of this appeal only.

Claim 12 stands or falls alone.

Claim 28 stands or falls alone.

Claim 39 stands or falls alone.

The reasons why each group of claims is believed to be separately patentable are explained below in the Argument.

#### VIII. ARGUMENT

#### A. Section 112, Second Paragraph, Rejection:

Claims 12 and 39 have been finally rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention. Appellants assert that claims 12 and 39 are not indefinite for at least the reasons given below.

With regard to claims 12 and 39, the Examiner states "the phrase 'to choose a low power request' cannot be ascertained because 'none of the devices are present'". It is unclear to the Appellants exactly why the Examiner believes this wording to be indefinite. Appellants respectfully traverse this rejection for at least the following reasons.

The Examiner does not clearly state why he believes the claim to be indefinite. Perhaps the examiner is asserting that under claim 12 the arbiter would be incapable of choosing a voltage request because no devices are present to assert voltage requests. However, nothing in claims 1 and 12 limits the arbiter to choosing a voltage request from only those voltage requests that it receives from the devices. Claim 1 is an open-ended claim and does not limit other possible sources or types of requests to the arbiter. According to claim 12, if the devices are not present, the arbiter is configured to choose a low power voltage request. Claim 12 does not require that the low power voltage request

come from one of the devices. In fact, clearly it must come from some other source since, in this case, none of the devices are present.

On the other hand, perhaps the Examiner is asserting that the phrase 'none of the devices are present' is inconsistent with claim 1 which recites "a plurality of devices." However, the Examiner should note that the phrase "none of the devices are present" is a part of the conditional phrase "if the plurality of device present signals indicate that none of the devices are present." The arbiter may be configured to handle various conditions in addition to the particular condition recited in claim 1. In other words, just because claim 1 recites that devices are present, that does not mean that the arbiter cannot also be capable of handling the case where no devices are present. Devices may be added or removed. Claim 1 does not require that the number of devices remain static. Claim 1 only requires that at some point in time a plurality of devices are present. Regardless, the arbiter can certainly be configured to handle more than one situation. For example, the arbiter may receive voltage requests from a plurality of devices, as recited in claim 1, and also be configured to respond as recited in claim 12 if those devices are later removed. Thus, claim 12 recites a definite additional limitation to claim 1.

#### B. Section 102(e) Rejection over Voegeli et al. (U.S. Patent 6,448,672):

Claims 1-5, 11-21, 30-32 and 40 have been finally rejected under 35 U.S.C. § 102(e) as being anticipated by Voegeli et al. (U.S. Patent 6,448,672) (hereinafter "Voegeli"). Appellants believe that the Examiner also intended to include claims 27-29 in the § 102(e) rejection; however, the basis for rejection of these claims is not clear in the Final Action. Appellants assert that claims 1-5, 11-21, 27-32 and 40 are not anticipated by Voegeli for at least the following reasons.

#### Claims 1, 2, 4, 11, 13-18, 20, 27, 29, 30 and 40:

Claim 1 recites, in pertinent part, "an arbiter configured to receive the voltage requests asserted by the devices, to choose a voltage request and to output the chosen

voltage request to one or more power supplies, wherein if any of the voltage requests asserted by the devices specify a voltage that is distinct from the voltage specified by any other of the voltage requests asserted by the devices, the arbiter is configured to choose a voltage request and to output the chosen voltage request to the one or more power supplies".

In contrast, Voegeli, at col. 9, lines 47 through 49, teaches "In the event that MB voltage requirements do not equal MA voltage requirements, the controller would not proceed to power up the modules 10". Voegeli also states at col. 9, line 67 through col. 10, line 2, "if voltage V3 is outside the range of V1-V2, then an <u>un-resolvable conflict is</u> present and power system controller 4 <u>reports an error condition</u>" (emphasis added).

It is clear that if Voegeli's system includes two modules, A and B, and if module A requests voltage V1 while module B requests voltage V2, where V1 is not equal to V2, an un-resolvable conflict results and no power is supplied to the devices. On the other hand, if the same condition is present in the claimed system, the arbiter chooses one of the voltage requests, and outputs the chosen voltage request to the one or more power supplies so that a corresponding voltage will be supplied to the devices. Therefore, the claimed arbiter is not anticipated by Voegeli's controller.

In the Telephone Interview of 3/22/04 between the Examiner and Applicants' representative, the Examiner referred to the example of col. 9, lines 61 through 67, in which Voegeli teaches one module 10 specifies a voltage range V1-V2 and another module specifies a specific voltage V3. The examiner referred to Voegeli's teaching that in this case the power system controller would resolve the potential conflict by supplying both modules 10 with voltage V3. However, in Voegeli's example cited by the Examiner, one module 10 specifies a voltage range of V1-V2, while the other module 10 specifies a single voltage V3, "where V3 is within the V1-V2 range". In contrast, claim 1 recites "if any of the voltage requests asserted by the devices specify a voltage that is distinct from the voltage specified by any other of the voltage requests asserted by the

devices". Since Voegeli teaches that "V3 is within the V1-V2 range", V3 is not distinct from V1-V2.

Voegeli does describe an example where the voltage requests are distinct. In Voegeli's follow-up example, at col. 9, line 67 through col. 10, line 2, where V3 is outside the range of V1-V2, the specified voltages are distinct and Voegeli's power system controller reports an error condition due to an un-resolvable conflict without powering up the modules. In contrast under these conditions, the arbiter of claim 1 "is configured to choose a voltage request and to output the chosen voltage request to the one or more power supplies". Therefore, the Appellants assert that claim 1, along with its dependent claims, patentably distinguishes over Voegeli.

Independent claims 17 and 30 are not anticipated for reasons similar to those given with regard to claim 1. Note that no basis was given for the rejection of claim 30. The applicants assert that the claims depending from these independent claims are patentable over Voegeli for at least the reasons given with regard to claim 1.

#### Claims 3, 19 and 31:

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The arguments made above with respect to claim 1 also apply to claims 3, 19, and 31. These claims are further distinguishable because Voegeli does not teach each of the voltage requests from the devices comprises a voltage identification (VID) code. Voegeli does teach that controller 4 may provide VIDs to power supplies 6 (see Fig. 7). However, Voegeli does not teach that the voltage requests that controller 4 receives from circuit modules 10 comprise VIDs.

#### Claims 5, 21 and 32:

The arguments made above with respect to claim 1 also apply to claims 5, 21 and 32. These claims are further distinguishable because Voegeli does not teach choosing the highest voltage from the voltage requests received by the arbiter. In Voegeli, if the

controller receives two different individual voltage requests, the controller does not choose the highest voltage from the requests. Instead, Voegeli teaches at col. 9, lines 47 through 49, "In the event that MB voltage requirements do not equal MA voltage requirements, the controller would not proceed to power up the modules 10". In the case of a requested range V1-V2 and a requested voltage V3, Voegeli's controller does not pick the highest voltage. Instead, the controller picks V3 if V3 is within V1-V2, or reports an error condition if V3 is not within V1-V2.

#### Claims 12 and 28:

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The arguments made above with respect to claim 1 also apply to claims 12 and 28. The Examiner never provided any explanation of how these claims are anticipated by Voegeli. Therefore, the rejection of claims 12 and 28 is further improper. These claims are further distinguishable because Voegeli does not teach choosing a low power voltage request corresponding to a low power state if the plurality of device present signals indicate that none of the devices are present.

# C. Section 103(a) Rejection over Voegeli et al. (U.S. Patent 6,448,672):

Claims 6-10, 22-26 and 33-39 have been finally rejected under 35 U.S.C. § 103(a) as being unpatentable over Voegeli. Appellants assert that claims 6-10, 22-26 and 33-39 are patentable over Voegeli for at least the following reasons.

#### Claims 6, 22 and 33:

With regard to claim 6, the Examiner states that Voegeli does not teach or suggest "the use of a 'low power signal' to indicate whether the devices should be placed in sleep or idle mode". The Examiner takes official notice that placing a device under sleep or idle mode using a low power indicative signal is well known. Appellants previously traversed the Examiner's official notice. Although placing a device under sleep or idle mode using a low power indicative signal may be well known in other contexts, the use of

a low power signal in a voltage request arbiter as claimed in combination with the other limitations of Appellants' claims is not known in the prior art. The prior art does not suggest combining such functionality with a voltage request arbiter. The Examiner points to the other cited references. However, none of the cited art mentions a low power signal or for that matter makes any reference to power saving modes of operation, let alone suggesting this functionality in a voltage request arbiter as claimed by Applicants. Even though Applicants' traversed the Examiner's taking of official notice, the Examiner never supplied any additional references to support his official notice. Therefore, the rejection is improper.

In the Final Action, the Examiner refers to the power saving mode for Intel's Pentium platform. However, this simply supports Applicants' argument. The Intel Pentium platform may very well include a power saving mode, but it does not suggest that a power saving mode be implemented using a low power signal to a voltage request arbiter as claimed in combination with the other limitations of Applicants' claims. Even if a power savings mode according to the Pentium platform were employed in a system using Voegeli's controller, the power savings mode would be implemented according to the Pentium platform, separately from the module voltage selection functionality described in Voegeli. The Examiner has not provided any evidence indicating that Intel's Pentium platform would suggest implementing a power saving mode using the controller of Voegeli. Therefore, the rejection is improper.

A similar argument applies in regard to the limitations of claims 22 and 33. Therefore, claims 6, 22, and 33 are further distinguishable over Voegeli.

# Claims 7, 23, and 34:

The arguments made above with respect to claim 6 also apply to claims 7, 23, and 34. These claims are further distinguishable because Voegeli does not teach or suggest choosing a first low power voltage request corresponding to the first low power state if the first low power signal indicates that the devices should be in the first low power state.

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Again, Appellants timely traversed the Examiner's official notice in this regard; however, the Examiner never supplied any additional references to support his official notice.

# Claims 8, 24, and 35:

The arguments made above with respect to claim 6 also apply to claims 8, 24, and 35. These claims are further distinguishable because Voegeli does not teach or suggest receiving a second low power signal indicative of whether the devices should be in a second low power state. Again, Appellants timely traversed the Examiner's official notice in this regard; however, the Examiner never supplied any additional references to support his official notice.

#### Claims 10, 26, and 37:

These claims are further distinguishable because Voegeli does not teach or suggest choosing a low power voltage request if any of the power supply signals indicate that any of the power supplies are not functioning properly. The Examiner took official notice that "using an indicative signal ... to indicate whether the power supply or voltage regulator functions properly is old and well-know [sic]". However, claim 10 recites more than just using an indicative signal to indicate whether the power supply functions properly. Claim 10 recites that the arbiter is further configured to choose a low power voltage request corresponding to a low power state if any of the power supply signals indicate that any of the power supplies are not functioning properly. None of the cited art nor official notices suggest modifying Voegeli's controller to choose a low power voltage request corresponding to a low power state if any of the power supply signals indicate that any of the power supplies are not functioning properly.

#### Claim 39:

Note that no basis was given for the rejection of claim 39. This claim is further distinguishable because none of the cited art nor official notices teach or suggest that the

arbitration stage is further configured to choose a low power voltage request corresponding to a low power state if the plurality of device present signals indicate that none of the devices are present.

# IX. <u>CONCLUSION</u>

For the foregoing reasons, it is submitted that the Examiner's rejection of claims 1-40 was erroneous, and reversal of the Examiner's decision is respectfully requested.

This Appeal Brief is submitted in triplicate along with the following items:

- Return Receipt Postcard
- Deposit Account Fee Authorization form for the \$330.00 appeal brief fee.

Respectfully submitted,

Robert C. Kower Reg. No. 39,255

Attorney for Appellants

Meyertons, Hood, Kivlin, Kowert & Goetzel, P.C. P.O. Box 398 Austin, TX 78767-0398 (512) 853-8850

Date: June 23, 2004

## X. APPENDIX

1. A computer system, comprising:

a plurality of devices, each configured to assert a voltage request;

an arbiter configured to receive the voltage requests asserted by devices, to choose a voltage request and to output the chosen voltage request to one or more power supplies, wherein if any of the voltage requests asserted by the devices specify a voltage that is distinct from the voltage specified by any other of the voltage requests asserted by the devices, the arbiter is configured to choose a voltage request and to output the chosen voltage request to the one or more power supplies; and

wherein each of the one or more power supplies is configured to receive the chosen voltage request and to provide a voltage that corresponds to the chosen voltage request to the devices such that the devices receive the same supply voltage.

- 2. The computer system of claim 1, wherein the devices comprise a processor.
- 3. The computer system of claim 1, wherein each of the voltage requests comprises a voltage identification (VID) code.
- 4. The computer system of claim 1, wherein if only one device in the computer system is configured to assert a voltage request, the arbiter is further configured to choose that one device's voltage request.
- 5. The computer system of claim 1, wherein the arbiter is further configured to choose a highest voltage request from the voltage requests received by the arbiter.

- 6. The computer system of claim 1, wherein the arbiter is further configured to receive a first low power signal indicative of whether the devices should be in a first low power state.
- 7. The computer system of claim 6, wherein the arbiter is further configured to choose a first low power voltage request corresponding to a first low power state if the first low power signal indicates that the devices should be in the first low power state.
- 8. The computer system of claim 6, wherein the arbiter is further configured to receive a second low power signal indicative of whether the devices should be in a second low power state.
- 9. The computer system of claim 1, wherein the arbiter is further configured to receive one or more power supply signals indicative of whether the one or more power supplies are functioning properly.
- 10. The computer system of claim 9, wherein the arbiter is further configured to choose a low power voltage request corresponding to a low power state if any of the power supply signals indicate that any of the power supplies are not functioning properly.
- 11. The computer system of claim 1, wherein the arbiter is further configured to receive a plurality of device present signals indicative of whether each of the devices are present in the computer system.
- 12. The computer system of claim 11, wherein the arbiter is further configured to choose a low power voltage request corresponding to a low power state if the plurality of device present signals indicate that none of the devices are present.

- 13. The computer system of claim 11, wherein the arbiter is further configured to choose a first voltage request asserted by a first device if the plurality of device present signals indicate that the first device is the only one of the devices present in the computer system.
- 14. The computer system of claim 1, wherein the one or more power supplies comprises one or more voltage regulators.
- 15. The computer system of claim 14, wherein the one or more voltage regulators comprises one or more voltage regulator modules configured to receive a VID code as an input and to provide a corresponding voltage in response to receiving the VID code.
- 16. The computer system of claim 1, wherein the arbiter comprises a programmable logic device (PLD) configured to receive the voltage requests, to choose the chosen voltage request and to output the chosen voltage request.
- 17. A method for arbitrating voltage requests in a computer system, comprising:

asserting the voltage requests from devices each configured to receive a voltage;

receiving the voltage requests;

choosing a voltage request;

outputting the chosen voltage request to one or more voltage regulators;

providing a chosen voltage to the devices from the one or more voltage regulators such that the devices receive the same chosen voltage, wherein the chosen voltage corresponds to the chosen voltage request;

wherein said choosing comprises choosing a chosen voltage request if any of the voltage requests asserted from the devices specify a voltage that is distinct from the voltage specified by any other of the voltage requests asserted from the devices.

- 18. The method of claim 17, wherein the devices comprise a processor.
- 19. The method of claim 17, wherein each of the voltage requests comprises a VID code.
  - 20. The method of claim 17, further comprising:

receiving a voltage request from only one device; and

wherein said choosing comprises choosing the voltage request from the one device.

- 21. The method of claim 17, wherein said choosing further comprises choosing a highest voltage request from the voltage requests received.
- 22. The method of claim 17, further comprising receiving a first low power signal indicative of whether the devices should be in a first low power state.
- 23. The method of claim 22, wherein said choosing further comprises choosing a first low power voltage request corresponding to the first low power state if the first low power signal indicates that the devices should be in the first low power state.

- 24. The method of claim 22, further comprising receiving a second low power signal indicative of whether the devices should be in a second low power state.
- 25. The method of claim 17, further comprising receiving one or more voltage regulator signals indicative of whether the one or more voltage regulators are functioning properly.
- 26. The method of claim 25, wherein said choosing further comprises choosing a low power voltage request corresponding to a low power state if any of the voltage regulator signals indicate that any of the voltage regulators are not functioning properly.
- 27. The method of claim 17, further comprising receiving a plurality of device present signals indicative of whether each of a plurality of devices are present in the computer system.
- 28. The method of claim 27, wherein said choosing further comprises choosing a low power voltage request corresponding to a low power state if the plurality of device present signals indicate that none of the devices are present.
- 29. The method of claim 27, wherein said choosing further comprises choosing a first voltage request asserted by a first device if the plurality of device present signals indicate that the first device is the only one of the devices present in the computer system.
  - 30. A voltage request arbiter, comprising:

an input stage configured to receive a plurality of voltage requests from a plurality of devices; and

an arbitration stage coupled between the input stage and an output stage, wherein the arbitration stage is configured to chose a voltage request, wherein if any of the plurality of voltage requests specify a voltage that is distinct from the voltage specified by any other of the plurality of voltage requests, the arbitration stage is configured to choose a chosen voltage request; and

the output stage configured to assert the chosen voltage request to one or more voltage regulators that provide one or more of the devices with a chosen voltage specified by the chosen voltage request such that the devices receive the same chosen voltage.

- 31. The voltage request arbiter of claim 30, wherein each of the voltage requests comprises a VID code.
- 32. The voltage request arbiter of claim 30, wherein the arbitration stage is further configured to chose a highest voltage request from the voltage requests from the devices.
- 33. The voltage request arbiter of claim 30, wherein the input stage is further configured to receive a first low power signal indicative of whether the devices should be in a first low power state.
- 34. The voltage request arbiter of claim 33, wherein the arbitration stage is further configured to choose a first low power voltage request corresponding to a first low power state if the first low power signal indicates that the devices should be in the first low power state.
- 35. The voltage request arbiter of claim 33, wherein the input stage is further configured to receive a second low power signal indicative of whether the devices should be in a second low power state.

- 36. The voltage request arbiter of claim 30, wherein the input stage is further configured to receive one or more voltage regulator signals indicative of whether the one or more voltage regulators are functioning properly.
- 37. The voltage request arbiter of claim 36, wherein the arbitration stage is further configured to choose a low power voltage request corresponding to a low power state if any of the voltage regulator signals indicates that any of the voltage regulators are not functioning properly.
- 38. The voltage request arbiter of claim 30, wherein the input stage is further configured to receive a plurality of device present signals indicative of whether the plurality of devices is present.
- 39. The voltage request arbiter of claim 38, wherein the arbitration stage is further configured to choose a low power voltage request corresponding to a low power state if the plurality of device present signals indicate that none of the devices are present.
- 40. The voltage request arbiter of claim 38, wherein the arbitration stage is further configured to choose a first voltage request from a first device if the plurality of device present signals indicate that the first device is the only one of the devices present.



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**Technology Center 2100** 

**PATENT** 5500-64900/TT4212

# IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.:

09/753,867

Filed: Januar

January 2, 2001

Inventors:

Edward C. Guerrero, Jr.

Jamie Juarez

John David Schell

Title:

Voltage Request Arbiter

Examiner:

Dang, Khanh

Group/Art Unit:

2111

Atty. Dkt. No:

5500-64900

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the date indicated below.

Robert C. Kowert

Printed Name

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June 23, 2004

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#### **FEE AUTHORIZATION**

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Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

The Commissioner is hereby authorized to charge the following fee to Meyertons, Hood, Kivlin, Kowert & Goetzel, P.C. Deposit Account Number 50-1505/5500-64900:

Fee:

Appeal Brief

Amount:

\$330.00

Attorney Docket No.:

5500-64900

The Commissioner is also authorized to charge any extension fee or other fees which may be necessary to the same account number.

Respectfully submitted,

Robert C. Kowert

Reg. No. 39,255

ATTORNEY FOR APPLICANTS

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(512) 853-8800 Date: June 23, 2004